

CLAIMS:

1. A container, comprising:
  - a container housing defining at least one compartment therein;
  - a substance contained in the compartment, the housing and the compartment being capable of coupling to a phototreatment device to permit heat transfer between the substance and the device; and
  - an indicator coupled to the compartment.
2. The container of claim 1, wherein the substance is a reuseable substance.
3. The container of claims 1, wherein the substance is a phase change material.
4. The container of claim 3, wherein the phase change material is selected from the group consisting of liquid carbon tetrafluoride, liquid CO<sub>2</sub>, ice, frozen lotions, frozen creams and frozen gels.
5. The container of claim 3, wherein the phase change material exhibits a phase transition from a liquid to a gaseous state.
6. The container of claim 3, wherein the phase change material exhibits a phase transition from a solid to a liquid state.
7. The container of claim 1, wherein the substance is a consumable substance.
8. The container of claim 7, wherein the consumable substance is chosen from the group consisting of topical substances, coolants, super-cooled liquids, pressurized gases, and phase change materials.
9. The container of claim 7, wherein the consumable substance comprises at least one of lotions, creams, waxes, films, water, alcohols, oils, gels, powders, aerosols, and granular particles.

10. The container of claim 8, wherein the coolant is one of liquid tetrafluorethane (R-134a), liquid CO<sub>2</sub>, ice, frozen lotions, frozen gels, cristallohydrates (45%CaCl\*6H<sub>2</sub>O: 55%CaBr\*6H<sub>2</sub>O ore KF\*4H<sub>2</sub>O), organic materials as HO(C<sub>2</sub>H<sub>4</sub>O)<sub>8</sub>C<sub>2</sub>H<sub>4</sub>OH (PE Glycol), Caprilic acid, Hexadecane, and Paraffin 5913.

11. The container of claims 1, wherein the housing and compartment are capable of being coupled to a phototreatment device to provide a flow path for substance release during phototreatment

12. The container of claim 1, wherein the substance further comprises a marker.

13. The container of claim 12, wherein the marker is selected from the group consisting of absorptive markers, photoactive markers, optical markers, fluorescent markers, electric markers, and magnetic markers.

14. The container of claim 12, wherein the marker is selected from the group consisting of dyes, metals, ions, colored particles, photosensitve dyes, photosensitive materials, carbon particles, conductive skin lotions, electrolyte sprays, conductive electrode gels, and oxides.

15. The container of claim 1, wherein the compartment is capable of being fluidly coupled to at least one of a head of a phototreatment device, a heat dissipating element, target area, or a tissue to be treated.

16. The container of claim 1, wherein the at least one compartment further comprises a first compartment and a second compartment, the first compartment adapted to couple to a tissue, and the second compartment adapted to couple to a heat dissipating element in the phototreatment device.

17. The container of claim 1, wherein the indicator is selected from the group consisting of mechanical indicia, optical indicia, magnetic indicia, electronic indicia, and piezoelectric indicia.

18. The container of claim 1, wherein the indicator is coupled to a detector that is configured and arranged to monitor a substance parameter.

19. The container of claim 18, wherein the detector is selected from the group consisting of a mechanical detector, an optical detector, a magnetic detector, an electronic detector, and a piezoelectric detector.

20. The container of claim 1, wherein the container is adapted to couple to a phototreatment device.

21. The container of claim 20, wherein the container is user-replaceable.

22. A method of operating a phototreatment device comprising:  
coupling a container of an adjuvant substance to a phototreatment device, the container having at least one indicator associated therewith to permit monitoring of the substance;  
evaluating the indicator; and  
enabling operation of the phototreatment device if the evaluation is acceptable.

23. The method of claim 22, wherein the step of enabling operation comprises activating a radiation source.

24. A system for measuring a speed of motion of a phototreatment device over a tissue region, the phototreatment device having an electromagnetic source to effect a phototreatment and the tissue region having a substance applied thereto, comprising:  
a radiation source positioned on the phototreatment device to irradiate the tissue region and the applied substance;

a detector associated with the phototherapeutic device configured and arranged to monitor the substance; and  
a processor for calculating a speed of motion of the phototreatment device based on signals from the detector.

25. The system of claim 24, wherein the system further comprises an applicator coupled to the phototreatment device for depositing the substance onto the tissue prior to irradiation of the tissue region by the radiation source.

26. The system of claim 24, wherein the system further comprises a comparator for comparing the calculated speed of motion with a defined minimum speed value in order to determine when the calculated speed has fallen below a threshold established by the defined minimum speed.

27. The system of claim 26, wherein the system further comprises a shut-off switch responsive to a control signal to terminate phototreatment when the speed has fallen below the threshold.

28. A phototreatment device for use with a marker, comprising:  
a radiation source to effect a phototreatment on a region of tissue; and  
a detector assembly to detect the marker and to selectively activate the radiation source based on marker detection.

29. The phototreatment device of claim 28, wherein the device further comprises an applicator configured and arranged to deposit the marker in at least a portion of the region.

30. A cooling system for extracting heat from a light generating device, comprising:  
a heat exchanger in thermal contact with a cooling fluid that extracts heat from the light generating device, and

a phase change medium in thermal contact with said heat exchanger, said phase change medium absorbing heat from the heat exchanger to undergo a phase transition, thereby removing heat from the heat exchanger.

31. The cooling system of claim 30, wherein said phase change medium is ice.

32. The cooling system of claim 30, wherein the cooling system further comprises a cartridge for containing a selected quantity of the phase change medium, said cartridge having an ingress port and an egress port and being adapted for removable and replaceable placement in a flow path of said fluid to allow inflow of said fluid carrying heat from the heated element via said ingress port so as to provide thermal contact between said fluid and said phase change material.

33. A cooling system for extracting heat from a handpiece of a photocosmetic device, comprising:

a heat sink in thermal contact with a heated element in the handpiece to extract heat therefrom,

a cartridge storing a phase change medium, said cartridge being adapted for coupling to the heat sink so as to provide thermal contact between said phase change medium and the heat sink, said phase change medium absorbing heat from the heat sink to undergo a phase transition from a solid state to a liquid state thereby removing heat from the heat sink,

wherein said cartridge includes one or more channels for removing liquid generated upon said phase transition.

34. The cooling system of claim 33, wherein said heated element comprises a component of the handpiece in thermal contact with a treatment site of a patient receiving radiation from said photocosmetic device.

35. The cooling system of claim 33, wherein said cartridge comprises a compartment coupled to said channels for collecting said removed liquid.

36. The cooling system of claim 33, further comprising a mechanism coupled to said phase change medium for exerting pressure thereon so as to maximize thermal contact between said phase change medium and said heat sink while said phase transition is in progress.

37. The cooling system of claim 33, further comprising a manifold coupled to said cartridge, said manifold having one or more ports for diverting a portion of said phase change medium in liquid state onto a treatment site of a patient receiving radiation from said photocosmetic device.

38. The cooling system of claim 33, wherein said cartridge further stores any of a therapeutic, a cleaning or a cosmetic agent to be released onto said treatment site via said manifold.

39. A cooling cartridge for coupling to a photocosmetic device, comprising a housing for storing a phase change medium, said housing being adapted for coupling to a heat sink incorporated in said device so as to provide thermal contact between said phase change medium and said heat sink.

40. The cooling cartridge of claim 39, further comprising one or more channels formed in said housing for removing fluid generated upon a phase transition of said phase change medium in response to absorbing heat from said heat sink.

41. The cooling cartridge of claim 40, further comprising a compartment coupled to said channels for collecting said removed fluid.

42. The cooling cartridge of claim 39, further comprising a mechanism coupled to said phase change medium for exerting pressure thereon so as to maximize thermal contact between said phase change medium and said heat sink upon engagement of said cartridge with said heat sink.

43. The cooling cartridge of claim 39, wherein the cartridge is adapted to be coupled to a handpiece of the device.

44. A method of operating a phototreatment device, comprising:  
applying a topical substance to a tissue;  
detecting a parameter associated with the topical substance; and  
enabling operation of the phototreatment device based on a detected value of the substance parameter.